

**What the invention claimed is:**

1. An intelligent transmitter receiver system comprising:

a CPU (central processing unit) adapted to control instructions for the actions of code-transmitting mode and  
5 copy-learning mode;

a data-entry keys input circuit adapted to input signal into said CPU;

a DC battery circuit adapted to provide the necessary working power supply;

10 a DC voltage rectifier circuit adapted to electrically connect a DC battery circuit and convert the output power of the DC battery circuit into the necessary working voltage;

a memory adapted to store code data obtained by said CPU and the center frequency value of said digital-to-analog converter;

15 an indicator lamp circuit adapted to indicate current operation mode subject to the instruction of said CPU by maintaining indicator lamp means thereof constantly on when at the code-transmitting mode, or flashing said indicator lamp means when at the copy-learning mode;

20 a digital-to-analog converter adapted to convert digital (parallel) signal into analog signal subject to the instruction of said CPU, so as to further drive a voltage-control type high-frequency transmitting circuit to change output oscillation frequency;

a voltage-controlled type high frequency transmitting circuit adapted to transmit an oscillation frequency subject to the control of said CPU and said digital-to-analog converter;

5 a bandwidth extension switching circuit adapted to extend the bandwidth of said voltage-controlled type high frequency transmitting circuit;

10 a mixer circuit adapted to mix the wave from said internal high-frequency transmitting circuit with the wave from an external remote controller, enabling the signal to be outputted only when wave mixing achieved;

a signal amplifier adapted to amplify signal from said mixer circuit and signal from a full-channel receiving circuit into a digital serial signal receivable to said CPU; and

15 a full-channel signal receiving circuit adapted to receive external series signal and to output received series signal to said CPU for rapid center frequency correction.

2. The intelligent transmitter receiver system as claimed in claim 1 wherein said CPU is adapted to drive said signal amplifier to store fetched serial signal in said memory.

20 3. The intelligent transmitter receiver system as claimed in claim 1 wherein said CPU fetches serial wave from said full-channel signal receiving circuit during frequency correction (scanning), and then turns on said voltage-controlled type high

frequency transmitting circuit to start wave mixing operation.

4. The intelligent transmitter receiver system as claimed in claim 1 further comprising a data-entry keys function switch adapted to switch data-entry keys of said data-entry keys input  
5 circuit between two systems so as to double the functions of data-entry keys of said data-entry keys input circuit.

5. The intelligent transmitter receiver system as claimed in claim 1 wherein said bandwidth extension switching circuit is comprised of at least one frequency switching diode.

10 6. An intelligent transmitter receiver system operation method used in the intelligent transmitter receiver system of claim 1, comprising a copy-learning mode and a code-transmitting mode, said copy-learning mode comprising the steps of:

a. driving said CPU to give an instruction to said  
15 full-frequency signal receiving circuit, causing said full-frequency signal receiving circuit to scan the presence of a code signal transmitted from an external remote controller when said data-entry keys input circuit is on;

b. driving said indicator lamp circuit to flash, informing the  
20 user of the effectiveness of the copy-learning mode;

c. storing the scanned code signal of the external remote controller into said memory circuit;

d. correcting the frequency;

e. driving said digital-to-analog converter to start counting from low frequency toward high frequency and reading in the serial wave received by said full-channel signal receiving circuit;

f. turning on said voltage-controlled type high frequency  
5 transmitting circuit to start wave mixing operation;

g. driving said CPU to go to said high-frequency transmitting circuit and said frequency range extension switching circuit through said digital-to-analog converter to mix provided oscillation frequency with the serial wave obtained from the  
10 external controller, and then to go to said mixer circuit and said signal amplifier to read the mixed serial signal;

h. driving said CPU to store the value of said digital-to-analog converter, and then to increase the frequency value of said digital-to-analog converter, and then to correct the  
15 frequency value of said digital-to-analog converter from high frequency to low frequency until the production of a second mixed wave, and then to obtain the mean value; and

i. storing the center frequency thus obtained in said memory;

20 said code-transmitting mode comprising the steps of:

A. driving said CPU to scan the triggering of key switches of said data-entry keys input circuit;

B. driving said CPU to fetch the corresponding code data

and transmitting frequency value from said memory subject to the key switch of said data-entry input circuit been triggered;

C. driving said indicator lamp circuit to give a signal indicative of the code-transmitting mode;

5 D. driving said CPU to output the fetched transmitting frequency value to said digital-to-analog converter and said frequency range extension switching circuit; and

E. driving said CPU to output the fetched code data to said voltage-controlled type high frequency transmitting circuit,  
10 enabling the assigned frequency to be transmitted to the unit been controlled.